

# AMERICAN EDUCATIONAL MONTHLY.

---

FEBRUARY, 1868.

---

## THE CO-EDUCATION OF THE SEXES.

TO what extent should the sexes be educated together? Is there any limit within the scope of our educational agencies at which the simultaneous instruction of boys and girls should cease? These questions deserve a more deliberate and careful examination by educators generally than they have yet received. If the well-being of society demands that the sexes should be educated together, then it is wrong to separate them in our schools. If otherwise, then the co-education of the sexes is equally wrong and impolitic.

Practically, the sentiment of our people is divided upon the subject; for we have schools for each of the sexes, and for both. So far as our common-school system is concerned, no distinction is made between the sexes in respect to their educational advantages, save in a limited number of cases in cities, where some of the grammar and high school departments are arranged for the separate accommodation of boys and girls. Generally, in our public schools the two receive simultaneous instruction, and are brought under the influence of the same teachers. Why should not this plan universally prevail, and why should it not be continued throughout the entire course of training to which the young are subjected? There seem to be no objections which cannot be obviated by suitable accommodations and appliances. In a truly good school, under accomplished teachers, there certainly can be no serious impediment in the way of this simultaneous education. In a poor school neither sex should ever be educated. Any objection, therefore, which would lie against the combined plan would be equally strong when applied to a separate one.

Let us consider briefly the facts which have a bearing upon the questions under discussion.

1. The school is designed for and ought to be an instrumentality for preparing the young for the duties of life. In actual life the sexes are and ever ought to be co-workers. They co-exist in the family, they mingle in the social gathering, in the church, in the street, everywhere. Why, then, should they be separated in the school? The mutual influence of the sexes over each other is everywhere a powerful aid and incentive to both in their respective spheres of duty; and nowhere is it more so than in the school. The duties of life are comprised in the work of the family, in the amenities of the social circle, and in the offices pertaining to the citizen and the Christian. In these duties the sexes are called upon mutually to bear a part. There is here no isolation and no exclusiveness, while here, too, they have need of mutual sympathy and support. Why do they not equally require the mutual stimulus of each other's presence and efforts in the course of preparation for these duties?

2. Men and women possess the same order of faculties. And in general they require the stimulus of the same order of truths for the proper development of these faculties. Indeed, the social element of our nature can be developed only by the mutual influence of the sexes. And is social education to be neglected in our schools? Are the manners and the personal habits to be left uncared for? Indeed, may we not find one of the best explanations of the lack of discipline and of the rough and often riotous demeanor of young men in our higher institutions in the absence of the refining and subduing influence of woman? Has it been proved by experience that in this isolated state the sexes make greater progress either in mental discipline or moral growth? Has not experiment rather established the reverse of this proposition? We are social beings. It is not wise to ignore this fact in our arrangements for the training of youth for the social state. It is not good for either man or woman to be alone. And this truth is verified in the history alike of our colleges and our female seminaries. No one that has had experience in college-life will dispute the demoralizing tendency of thus isolating young men from the benign influences which spring from the presence and society of woman. Nor would the history of exclusively female schools, if made known, afford to the philosophic educator results any more encouraging or satisfactory. Clandestine communications, secret meetings, and lapses from truth and duty are the legitimate fruits of violated social laws. The *science of temptation* should not constitute an element in the courses of training pursued in our schools. But such seems to be the case in these exclusive and one-sided plans for the education of youth.

The argument for the simultaneous education of the sexes, in our higher schools, derives strong support from actual experience. There are

scores of able and successful educators in our country whose testimony concurs in favor of the highly salutary influence of the sexes, not only upon each other, but upon the discipline of the school. For the most part all well-regulated institutions of this character are self-governing. Breaches of good order, riots, and midnight revels are unknown in their history. Intrigues and clandestine communications are almost as rare in them, because there is no temptation to such conduct: the school is made to conform to the laws of human nature governing the intercourse of rational beings in a refined and cultivated society. The schools in which both sexes are educated conform to the conditions of real life and to the wants of that society for which they ought to be a means of preparation. It is the experience of all who have had the management of such institutions, that the intellectual stimulus growing out of the reciprocal influence of the sexes upon each other is of the most decided character. Young men and women are made brighter intellectually, as well as morally more noble and socially more refined, through the influence mutually exerted by each upon each in consequence of such association.

This subject will bear discussion. There are radical defects, we believe, in the plan of isolated instruction, which can be remedied only by conforming our educational institutions more fully to the conditions of that society in which the young are in the future to bear a part. Let facts bearing upon this question be accumulated. Nothing would be more profitable than the testimony of those who are engaged in conducting institutions of learning of the higher class, in which young men and young women are under instruction together. The object of this paper is to awaken and invite such a discussion.

---

## THE PRINCIPLES OF GRAMMATICAL CRITICISM.

**I**N our disputing about grammatical points, there is too little reference to fixed principles of grammatical criticism. Critics seem to depend usually upon authority rather than reason—the authority of some great name, or the authority of general usage. Now, of course where the usage of educated men is unanimous, this authority is conclusive,—not as to what the spelling, the pronunciation, the grammatical form, or the syntax of certain words *ought* to be, but as to what they *are* in fact. Usage cannot be an ultimate authority for criticism, but only for usage again. But the points upon which grammatical critics dispute, are

usually those upon which usage also is divided, so that in such cases an appeal must be made to some higher authority than mere usage. Now what is this higher authority? To determine this we must know what are the principles on which language in general, and the English language in special, grows.

The growth of all language is determined by the action and reaction of two principles, which we call the *logical* and the *historical* principles of language. The logical principle is the tendency of language to become consistent with itself, and to conform seeming exceptions to some general rule; in short, to make the language philosophically accurate. The historical principle is the tendency to follow old custom, to retain anomalies, whether with or without reason. The logical principle makes grammatical rules; the historical tendency keeps exceptions. To take a simple, every-day instance. When a child says, "I knowed," it follows the logical tendency of language; when its mother corrects it to "I knew," she follows the historical tendency. The phonetic spelling is logical; our common spelling is historical.

No language has ever yielded itself exclusively to one of these tendencies; but most languages have followed one or the other to a great extent. The Hungarian, the Chinese, and some of the American languages, have followed the logical tendency almost exclusively; while the European languages of the Aryan stock are to a less extent subject to the historical tendency. English carries the historical tendency further than any of them. A nation's language, like a nation's laws and social customs, are the product of the nation's mind. The English mind is pre-eminently historical. To say that a thing is an anomaly, is no argument against it to an average Englishman; but to say that an abuse even is venerable with age, is to his mind a strong argument for it. In language we Americans are more English than in anything else; though even here our more logical way of thinking has already had its influence on both sides of the ocean, and is destined, undoubtedly, to have much more in future.

Now, in our criticisms upon language we must follow the spirit of the language. This is the duty of all criticism everywhere, and it is peculiarly the duty of all criticism upon language. The spirit of the English language, as we have seen, is pre-eminently historical. The logical tendency is felt, but not so strongly as the historical. In all our criticism upon the English language, therefore, we should be first historical, then logical. For even where English has become thoroughly logical, which it rarely is, it has been under the influence of historical facts rather than of the pure logical tendency. The logical gender of English, with no artificial distinctions, is so, partly because of the plain, matter-of-fact character of the English mind, which never recognizes so much

poetical gender as other languages, and partly because of the disintegration of the language following the Norman conquest; though in fact even here we are not perfectly logical, for there is more or less poetical gender in English even in prose and common conversation. The strong form of the perfect and of the participle has held its ground by mere force of custom long after any appreciation of its real meaning had died out of the national mind and even out of the text-books. Many abuses in our spelling are retained contrary to analogy, to etymology, to sound and to sense, simply because they are there—nobody knows how. The apostrophe is used with the possessive case, from a false etymology; but though the etymology has been long since rejected by all scholars, the apostrophe is retained by mere force of custom. There is no such phenomenon in English as that presented in Arabic, for instance, where the whole structure of the language has been modified by a single principle, conceived by the national mind, and carried by grammarians even where it did not really exist, so as not to allow such a thing as an exception to the universal rule. No such thing could be conceived, much less carried out by the English mind, for it is historical rather than logical.

Now all criticisms upon the English language should recognize this fact. Criticism upon a language must be in sympathy with its spirit, though not carried away by it, so as to recognize the excellences there may be in other languages. The English language is *both* historical and logical, though much more the former than the latter. Criticism should recognize both in their true proportions, correcting one tendency by the other. Where any usage is both historical and logical, it should be held to without hesitation. Where any usage is neither historical nor logical, but is a recent affectation, contrary to analogy and to former usage, it should be discountenanced. Where the historical and logical tendencies seem to conflict, it is of course not so easy to decide what criticism should say. Sometimes, as in the case of the strong verbs, the historical and logical tendencies are only seemingly at variance, but really the same, if we only look a little deeper. Where there is a real conflict, we must decide each case on its own merits—giving the greater weight, however, to the historical tendency.

So much for one of the duties of criticism, deciding what ought to be. The other duty lies in explaining facts, about which, as facts, there is no dispute. The same general rule holds good here. Where both historical and logical tendencies agree, there will probably be no trouble, unless it comes from some shallow critic, who, against all reason, would decide every phenomenon of English by the rules for Latin, or some other foreign language. Where a question arises, however, between the historical and the logical tendencies, we must first get our evidence upon

which to decide, from more ancient forms of English,—above all, from the Anglo-Saxon ; and secondly, from the analogy of languages, like the German, which are closely related to us, or like the French or Latin, which have had a great influence over us ; and ultimately from the principles of general grammar. The evidence is thus mostly historical evidence, which is what the structure of the language demands ; and the decision will be mainly on historical grounds, though with some weight given to the influences of the logical tendency.

In giving these principles of grammatical criticism, in order to be brief I have been compelled to be abstract. I intend to apply these principles to elucidate certain disputed points in our grammar, and to decide certain questions of usage.

---

#### APTFNESS IN TEACHING.

**A**PTNESS in teaching implies a natural and developed tendency and fitness for the work. The self-importance which is assumed in seeking and displaying titles and degrees, and the inordinate eagerness to push self-interest in the direction of higher position and salary, do not denote the apt teacher ; nor does the bustle with which some show their dissatisfaction with present modes of “marking” pupils, or with which they discuss the modes of treating insubordination or truancy ; or the questions of the comparative importance of principals and assistants, or of the relative merits of divers text-books ; nor does a perpetual canting about the advantages of teachers’ associations and the want of interest in them manifested among a certain class of teachers ; nor yet does an incessant talk about school out of school-hours. They who, in their conversation, make these the topics of chief importance, show that their hearts are not in the work, that they are mechanical teachers and not live teachers. Aptness at teaching denotes a state of mind, which does not indeed disregard proper self-advancement, nor yet contemns details ; but which is chiefly occupied with the great question of pupil-nature and the demands of that nature ;—what is food for it ; what ought to be withheld from it ; how it may be aroused, drawn out, trained ; how its affections may be gained and directed ; how it may be made to grow up in reason, intelligence, humanity, nobility, usefulness. He who is apt to teach comes down with the directness of insight and of zest to the first simple principle of pupil-nature ; and, from a knowledge of this, contrives the whole machinery of management. He conforms the machinery to the pupil—not the pupil to the machinery.

The tendency to resort to contrivances for turning the pupil into a mere studying and reciting machine, and the opinion that success in teaching is achieved in proportion to the degree of precision which the human machine is made to attain, denote a want of aptness, in the lack of appreciation of the most essential element of the work—communication. When a class in a celebrated institution remonstrated with their teacher, he replied: "I don't come here to tell you anything; I come to hear you recite." This is not teaching. The mechanical method aims singly to employ the mechanical memory. Should the pupil's understanding operate, it will be by dint of independent energy, and in spite of the repressive influences of the method. The apt teacher will be ever aiming to reach the pupil's understanding by means of communication.

This aptness in communicating knowledge depends upon something more than mere erudition, and will show itself in something more than in mere appreciation of this or that method. Erudition and appreciation alone will be of little service in the school-room. Some men are great storehouses of knowledge, but are always locked up. Some are admirable organizers and managers, acutely appreciative of the needs of the school-room, keenly perceptive of the qualities, measures, and adaptedness of others for the work, and yet are not themselves apt teachers. The apt teacher will communicate not only when questioned, but will anticipate questions. He understands the workings of the pupils' minds. He has the faculty of measuring the understanding of each pupil and of adapting himself thereto. He will in reality reach the understanding of his pupils. His aptness will be recognized by his pupils in the interest which they will manifest. Most of them will be eager for his utterances, and will be full of inquiry; so that his administrative faculty will be employed less in suppressing listlessness and playful restlessness, than in repressing inordinate inquiry. By communication, thus, the apt teacher not only gives but he draws out. He both instructs and educates. And his pupils become his living epistles, known and read of all.

From the foregoing it may be inferred that the apt teacher will be disposed to be independent of text-books. He will be master of his theme, without being wedded to the text of some preferred author. The theme will live in him, and will find its own language out of his own mouth. And in the pupils there will be awakened and kept alive a corresponding spirit of spontaneity, so that it will make but little difference to them what text-books they open.

Now this aptness in teaching, producing, as it does, *growth*, meets with much hostility from quarters where influence or control in school-matters is exercised. There is a manifest impatience felt toward the

slowness which belongs to growth. Unless progress is visible to the observer while he sits and watches, it is not acceptable. There is a cry for methods of teaching that will produce immediate palpable effects. Applause is given to methods which enable the pupil to "get along fast;" which "put the pupil through a good deal of varied matter;" which produce "glibness in recitation." Parents think it a fine thing to have their children "know a good deal;" and trustees and commissioners take delight in having the schools under their supervision show "brilliancy" in recitation. Under such circumstances mechanism thrives. It is easy to be mechanical. Unapt teachers multiply and prosper, and often secure the chief places. Tacit mutual preservation winks at abuses. School-book authors and book-agents make money. Pretension flaunts its titles and degrees. And aptness works quietly on in unrecognized obscurity.

The remedy, in part, is to be found in rendering our Normal Schools more purely normal. Aptness in teaching should be required of the candidate for a diploma no less strictly than erudition. The critical standard of these schools should be raised by the purchase of the best professorial talent for the respective chairs. Partly, too, the remedy is to be found in largely increasing the emoluments to teachers generally, so that men and women of aptness in teaching will be induced to indulge their bent to enter the field. The public must be willing to give their money to the cause of education with unstinted liberality. Strict care, too, should be taken that the control of educational matters shall be in the hands of those who are capable of discriminating between the apt teacher and the unapt, and who are moved to the work by disinterested motives, and are not capable of being manipulated by interested parties.

---

To the young, the truth (bare before the sight, palpable to the touch, embodied in forms which the senses realize) has a charm which words cannot convey, until they are recognized as the sign of the truth which the mind comprehends. In all that relates to the phenomena of the world, the best book is Nature, with an intelligent interpreter. What concerns the social state of man may be best apprehended after lessons in the fields, the ruins, the mansions, and the streets within reach of the school. Lessons on individual objects prepare the mind for generalization, and for the exercise of faith in its proper province. Schools in which *word-teaching* only exists, do not produce earnest and truthful men.

## THE SMITH FAMILY.\*

### INTRODUCTION.

#### *Chapter I.—Antiquities.*

**S**mith, Schmidt, Smyth, Smythe, Smite, Smart, Schwartz, and Swart, are some of the roots of the great family cubes now comprehending in themselves the far larger portion of the human race. From the last mentioned of these, by easy transition, entrance is established into the collateral lines of the Blacks, Browns, Greys, and Taney (née Tawneys), and other people of color. Like the modern Jews, this mighty brood has its representatives on every continent, peninsula, island, and isthmus, and scions of the stock are to be found on every ocean, sea, gulf, lake, and watercourse. The most learned existing linguist could not give a tithe of the variety of forms the honored name has assumed in various localities. Suffice it to state that Smithson in Saxon, O'Smith in Erse, Ap Smythwydd in Welch, MacSmith in Gaelic, Smithvich in Sclavonic, Ho-sa-mit in Chinese and Japanese, are some of the additions used in the countries spoken of. To attempt to exhibit its transfigurations in the Norse, Russian, Kamschatkan, and Tartar dialects, would be physically impossible. The mere endeavor so to do, if it did not wring the writer's hand off, would most probably drive the compositors crazy; and if it did not previously tear the paper in pieces, would be certain to act as an emetic on the reader.

The pedigree of this prolific and indomitable generation is unquestionably of the very highest antiquity. Minute researches amongst the most ancient authors justify the assertion that the title by which our respected progenitor, Adam, was known to all the lower animals in Paradise was that of "Smith." There is reason to believe that they always addressed him by that cognomen; for, to this day, the serpent, the wisest of the brute creation, whenever it meets with any of his descendants, endeavors to pronounce that word, although it seldom or never succeeds in uttering distinctly more than the first letter of the magic syllable. It is admitted that the captious may cavil at this statement; but, conceding it to be erroneous, it is certain that the name was borne by Tubal Cain "Smith," who flourished in the ninth century of the world, and ranks seventh in direct descent from Adam. A singular proof of the correctness of this statement has lately been in the possession of the writer.

\* Entered according to Act of Congress, by Robert W. Hume, in the Clerk's Office of the District Court of the United States for the Southern District of New York.

The manuscript containing it was recently abstracted, conveyed, or annexed by a friend from amongst a mass of relics lately exhumed at Rome by authority of the Pope. On examination, it proved to be the "Sacred Book of Manetho," which, for many centuries, has been supposed to have been destroyed. It was beautifully illuminated, and amongst the illustrations was one containing a perspective view of Abel Street, the principal avenue in the ancient city of Enoch; and on the corner-house, directly fronting the spectator, the following design and legend were distinctly depicted.



The above chart proves, that though it be disputed that Adam was the great original, the seventh man in the order of generation certainly was T. C. Smith. This is also corroborated by the well-known name of the artist and the general appearance of the design. The work of which it is a copy may have been executed A. M. 903; but again, there are reasons why 917 ought to be preferred. Possibly it would be best to fix on some date betwixt the two—say 910 or 11. The letter **D** in the word **DUN** and the orthography would point to 903, the more ancient era, corresponding with our A. C. 3101; but the kettle, or **KETEL**, as it is in the original, has decidedly a more modern appearance. The elaborately ornamented implements exhibited at the sides are supposed by some antiquaries to have been "metallic instruments" used in those days for curling and braiding the hair. There are other philosophers who stoutly dispute this theory, declaring that by their form they were manifestly "wooden," and were most probably made of the famous pre-Adamite gigantic palm-tree, from which was formerly obtained a kind of timber very similar to ebony, only it was white in color, very porous, and incapable of receiving any polish. These latter also maintain that the article depicted on the left was the four-legged pen with which the

cuneiform writing of that period was accomplished, whilst those on the right, they maintain, from inscriptions on the pyramids, to have been tools then commonly used by the antediluvian farmers for pitching beans, peas, wheat, millet, and other small grains into their barns. As it cannot for a moment be supposed our respected ancestors would be guilty of a tarradiddle, both parties have agreed that the "golden kettle" was unquestionably formed from that precious metal, and is, in itself, a clear proof that gold once existed, and was at one time in use amongst mankind. It is, as may be seen, beautiful in design and absolutely perfect in form, which would not have been the case had it been of more modern date. For it is certain that, were such an article now to be exposed in any civilized community, it would not be a week before the government of that nation would have its spout off for taxes. It has been considered necessary to furnish the public in detail with all the pros and cons connected with the above-mentioned document, because it may be considered to fix accurately the antiquity of the great Smith family. If more proof be required, it can be produced. For in the same book an incident is related pertaining to one of the children of the above Tubal-Cain Smith, who was whipped for emulating the example of his great namesake (Cain No. 1), and flogging a boy twice his size (to the honor of the family) because the latter irreverently and insolently called him, young Smith, "a son of a tinker."

Here, in order to prevent the sacking of the office from whence this periodical is issued, and to anticipate all efforts in the way of burglary, arson, etc., it is well to inform antiquarians, geologists, and all such old buffers as pass their time in collecting old coins, hats, ballads, stones, etc., that the volume of Manetho previously spoken of is now utterly destroyed. It has been burned up, and its ashes strewn, not upon the waters, like unto the golden calf of the Israelites, but upon the winds, where the ashes of the paper calf of the present age, which the people now worship, are likely speedily to follow it. It is hoped the reader will excuse this digression, for it is absolutely necessary. It is requisite for the peace of the public that the dumbies previously mentioned should be duly notified of the fact of the utter annihilation of that book; for if any one of the old grubbers dreamed that it was yet in existence, he would turn creation upside down to get at it. It is impossible to overestimate the malignity of those old scorpions. They monopolize all the heroes of adventure, science, and art, and never permit any to approach the temples of popular instruction until they have taken toll at the gates. As to those "miserables" who appear before them for judgment, lacking influence, ability, or opportunity to compel a favorable verdict, they turn their cold, leaden eyes upon all such, with aspects so awful, that, compared with them, the ancient Gorgon's Head might be

considered a fountain of life. Unhappy wretches who have been compelled by circumstances to pass through the ordeal, have been heard to declare that it froze the very marrow in their bones. At other times, however, these codgers are nimble enough. Let any disinterested bystander watch one of them as he is showing the varieties of his private sanctum to his confreres, or handing round his gimcracks to his visitors for inspection, and he will see glittering through the goggles of the exhibitor who owns them a pair of eyes sharp enough to pierce a hole in a diamond. For, gentle reader, there is not one of the fraternity too good to steal an old bone, or a copper, or a bit of rag from any of his brethren, whenever he conveniently can. In public, all that these old fellows do is to organize grand pow-wows, and smoke, and eat, and swill, often at the expense of the community; and whilst they are thus engaged guzzling and gormandizing, all the glorious old stone bulls and snakes of our country are carted off to adorn Paris or Leyden, or shipped to plaster the walls of the British Museum in London.

But, a truce with these monomaniacs, each of whom carries under his mantle his particular hobby-horse, which he trots out on every occasion. They are supernumeraries here, but it is their specialty thus to thrust themselves forward, in order to rob the meritorious of the applause of the public. As they do not admit reason, save under compulsion, it cannot be expected that the foregoing statements will obtain their sanction. To them innovations are absurdities, and no truth can be established save in defiance of their strenuous opposition. It is even possible that they may dispute the validity of the extracts from Manetho, knowing that the sacred volume cannot now be produced in evidence against them. Nevertheless, with them, without them, or over them, the writer trusts that he has succeeded in establishing, by indisputable argument, based on indubitable authority, the great antiquity of the family, some of whose later experiences are about to be commemorated.

---

### *Chapter II.—Facts.*

It is deemed necessary to notice here some of the more prominent features of the queen cities of the East and West—London and New York—the localities of the interesting events about to be related. The former city, London, is of very ancient date. It has once been nearly burnt down for its sins; but, like Ajax defying the thunder, it immediately after commenced another debtor account by erecting a lying column to commemorate the event. Its inhabitants are noted for their wealth, and as they are Christians, a Turk might suppose that poverty is

comparatively unknown among them. It may also be stated that they are singularly easy and affable in their manners, that they recognize no class distinctions, and are especially distinguished for their taste and admirable knowledge of the rules of decorum. They set a very low value upon their own excellences, appreciate highly those of their neighbors, and are said to speak the English language in its original purity.

As might be expected, New York has improved upon London in the arrangement of its population. It is also remarkable for its excellent civic regulations, and its devotion to the laws. It is governed by a mayor, into whose hands the burden of magisterial power is committed; and it is said to be a very heavy load. It is very proud of its ancient rights and very jealous of its independence. It never bartered away its birthright, like Esau, because it has never yet been offered any pottage for it. Its population has latterly been very largely increased by an influx of the choice spirits of humanity which have deluged it from every quarter of the habitable globe. In it you may meet Parthians, Medes, Elamites, and backwoodsmen; Jews, Romans, Cretes, Arabs, and red-warriors; to which may be added Ethiopians, Chinese, and Japanese. But, though collected from every corner in creation, they all discover that innocence and affection which are the genuine ear-marks of the Great Smith Family, inasmuch as each of them exhibits the most lively and tender regard for his neighbor's interest (and principal also), and rarely speaks of another, of a different nationality, without spicing his discourse with the most endearing epithets.

There are many points, however, in which these great emporiums rival each other. Both depend mainly on the cultivation of the moral forces of the community (by improving and extending the comforts and consequently the health of the classes by whose labors they are supported), for the security of their civilized existence. Both are especially noted for the humility, integrity, and temperance of their more immediate rulers; both have good reason to reflect with pleasure on the continuous and rapidly-increasing decadence of crime and misery within their borders, and both are at present rejoicing over the decrease of their civic taxation. From these data it will easily be perceived that, in them, the masses of humanity revel in ease and cheerful contentment, whilst from them as centres, virtue and innocent delights are promulgated throughout the countries in which they are located.

In conclusion, the writer begs to congratulate the reader and himself on the circumstances under which this history is commenced, and the fitness of the times in which it is promulgated.

1. In consideration of the peaceful attitude and settled condition of the peoples inhabiting the civilized portions of the globe, and the cheerful affection and mutual good-will which is constantly developing itself

between the great producing and consuming bodies of which they are composed.

2. For the assured stability of the governments of the world, which appear to be seated in serene security from China to the United States : from the *Manichou* dynasty, which is or was at Peking, to our own Republican rulers, which are or were at Washington.

3. For the vast accessions of wealth which have latterly rolled in upon us ; for which we are indebted to the industry of our engravers and the diligence of our paper-makers and printers, and not to the services of our agricultural laborers, miners, and mechanics.

4. For the inventive genius of man ; which, at the present period, is so successfully applied in perfecting and extending the powers of implements of destruction, and which cannot fail of soon calling down a fitting blessing upon our labor and our skill.

And lastly, because it is written to a people who are eminently gentle, tractable, and willing to be taught by their pastors ; and who may justly boast of a daily press, which, aided by the stage and still further assisted by the disinterested guardians of the public games, is constantly engaged in elevating their ideas and improving their morality.

It is evident that this chapter could be indefinitely extended, but in the mean time, that miserable wretch, John Smith, carpenter, and son of a carpenter, is waiting at the door for admission.

Here, gentle reader, you have the facts, which justify the heading of this chapter. They are seven in number, two in the commencement and five in the last paragraph. They instruct you with regard to places, tell you the Christian and surname of the Hero, noting also his pedigree, calling, and condition in life at the period above mentioned. If you can discern any more, you are welcome to enjoy them.

And now we close this long-winded preamble—not for lack of matter, for any man could scold at those old grannies treated of, all day ; neither, lest the modesty of the cities above-mentioned should be offended, for, having special faith in their own purity and integrity, they can sustain, without blushing, any amount of glorification ; nor because our major subject is barren, for if you collected all the money-bills of the civilized world, it is questionable if even they would contain sufficient paper to hold merely the names of the individuals of the Smith species ; nor yet because the writer of this history desires to close the discussion, for he is remunerated by the yard, and the more matter there is inserted the better for his advantage : But for the following reasons, with which it is hoped the reader will be entirely satisfied ;—First, because it is doubtful whether the editor will submit to any further imposition ; and, secondly, because it is certain that, by this time, the patience of the public must be entirely exhausted.

## INNER LIFE OF REFORM SCHOOLS.

### THE AGRICULTURAL COLONY AT METTRAI.

ON the Loire, about a hundred and twenty miles southwest of Paris, stands the ancient and elegant city of Tours, famous for its historic associations, its wide and beautiful streets, the venerable remains of its old cathedral and the majestic proportions and surpassing elegance of its new one. Four miles distant from Tours is an object more attractive to the philanthropist and educator than anything which that royal city can afford. It is the Reform Colony of Mettrai. Through a simple wicket-gate the visitor approaches a thrifty-looking hamlet, whose appearance bears little evidence that it is a place of confinement for criminals,—no walls, no sentry, no password, no visible means of restraint are there ; yet six hundred of its inmates have confronted a court, and are here undergoing sentence for crime.

In 1837, a judge of the Court of Assize at Paris, M. de Metz, was appointed on a commission to visit and report upon the prison-system of the United States. It had been a peculiar source of pain to him, in the discharge of his duties as judge, to administer the sanctions of the law upon the many children of tender age brought before his bar. By a provision of the law, offenders under sixteen years of age were, at the discretion of the magistrate, declared not guilty of crime, on the ground of having acted without discernment ; but the State reserved the right of holding the child in custody for its instruction and discipline. The operations of this law, intended to be merciful, proved disastrous ; the *delenues* were returned to prison with older criminals, and became more depraved by the discipline to which they were subjected, rather than benefited by it. While in this country, the attention of M. De Metz was specially arrested by the Houses of Refuge in New York and Philadelphia ; and he became greatly interested in the happy results attending the training which these institutions bestowed upon their inmates. He returned to Paris, resigned his office, gave over his brilliant prospects of eminence in his profession, and from that time devoted himself entirely to the work of rescuing the juvenile criminals of his beloved France. By his personal influence and exertion he secured the formation of an association called the Paternal Society, having for its object to exercise a benevolent guardianship over all children acquitted on the ground of having acted without discernment, who might be committed to their care by the magistrates ; to secure for these children a moral and religious training, together with elementary instruction ; to have them taught a trade, and then to place them in the country, as apprentices to

tradesmen and farmers. But their self-imposed duty to their wards did not cease when they were thus provided for. The society continued to watch over and assist them as long as they might require it.

Having secured patrons, De Metz next turned to the consideration of the character of the establishment in which the society should begin its benign experiment. The American Houses of Refuge, with their penitentiary system, high walls and cells, bolts and locks, did not entirely suit him. With another member of the society, he visited and carefully examined the reformatory establishments of Belgium and Holland, which had already begun to attract attention. When they reached Hamburg and saw the wonderful creation of the well-beloved Wichern, they found the solution of the problem which they had in charge to study. The advantages of the Family system were fully recognized, and it was decided to make it the fundamental principle of the proposed establishment. Just at this time M. le Vicomte de Courteilles, a schoolfellow of de Metz, renewed his acquaintance with him, and entered heartily into his plans. More than this—he offered his estate at Mettrai for a foundation for the colony, and devoted the remainder of his life, without compensation, to the work that had taken such hold upon his heart.

In 1839, five three-story houses were erected, and in the course of a few years five more. Each house is arranged for forty inmates, with their officers. The ground-floors are used as workshops; while each of the upper stories is appropriated to twenty boys,—a single large room being made to answer for their eating, sleeping, and school room. Each house is presided over by a chief, a sub-chief, and two elder brothers (as they are called), which the boys select from their own number, subject of course to the approval of the directors.

On arriving at the colony, the young offender is examined in regard to his past life, and a record is made of all the circumstances of interest concerning him—a record which is continued during his stay in the institution, and, so far as possible, after he leaves it. He is then assigned to the farm or a workshop, as may be thought best, regard being had to his age and strength and particular capacity. The principal labor of the colony is agriculture; and the boys are carefully instructed in it, theoretically as well as practically. The trades taught are simple, and pertain chiefly to the making of agricultural implements. Those boys who come from the sea-shore and will return to follow a seafaring life, are instructed in the terms and ordinary labors of the sailor; there being provided for this purpose a plot of ground, marked off in the shape of a ship, with masts, rigging, and so forth. Two hours a day are spent in school; so that during their five years' sojourn at Mettrai the boys receive substantial instruction in the rudiments of knowledge.

The government of the school is maintained principally by a constant

appeal to the spirit of emulation—not the highest nor the best motive, nor, possibly, one that will secure the most harmonious and beautiful development of character; but it is a peculiarly powerful appeal to the heart of a French boy, and specially adapted to secure early and signal results. When a boy has passed three months without a reprimand, his name is inscribed on the Roll of Honor, which is hung upon the wall in the great school-room, and remains there until a fault causes it to be struck off. Small rewards—sometimes a trifling compensation for work, sometimes a public commendation of the family or the individual well-doer—are bestowed when deserved. When all the members of a family have passed a week without receiving reprimand or punishment, they are allowed to raise a flag from their roof, and to display upon the walls of the family-house the presents and tokens of honor which the family, collectively or any of its members, have received; but with the first fault committed all these ensigns must be struck. This naturally causes the members of the several families to take an extraordinary interest in each other's good behavior. And families have been known to petition the removal of a vicious member whose constant misconduct has kept down the standard of the whole.

The punishments are severe, but not brutal—low diet, hard labor, confinement in a cell, sometimes a dark one, and finally, for persistent misconduct, a return to the central prison. No restraint but a moral one and the presence of superiors, is required to retain the young *delenus*. An appeal to honor with these French boys, and the continual exhibition of the most lively interest in their welfare, binds them more firmly than walls or bolts to their house of redemption. Said a visitor to one of the boys, "Why do you not escape?" "Because there are no walls, and it would be disgraceful," was the prompt and undoubtedly sincere response.

The discipline is military. The inmates wear uniforms, and march to and from their work, their lessons, and their meals, to the sound of trumpet and drum. A striking proof of the hold this system has upon the minds of the boys was given at the time of the revolution of 1848. France was then in anarchy, and all the government schools were in rebellion. At Mettrai there was not a sign of insubordination; not a child attempted to run away. "Here is a wonderful prison," said the Secretary of the Senate, "where there is no key, but the keys of the fields. If your children remain captive, it is proved that you have discovered the key of their hearts." During this period a band of workmen came to Mettrai with flags flying and trumpets sounding. Meeting the boys returning tired from field-labor, the rioters thus addressed them: "My boys, do not be such fools as to work any longer. Bread is plentiful; it is ready for you without labor." The chief, who was conducting the

boys, behaved with the greatest calmness and tact. "Halt! form a line," he commanded. The boys, being accustomed to march like soldiers, immediately obeyed. Then the chief stepped forward, and said to the men: "My friends, you have learned to labor, and you have a right to rest; but leave these lads; let them learn now, and when their turn comes they may rest as you do—March!" The men gave way, the boys marched home, and Mettrai was saved—"saved, as I believe," says De Metz, "by our habit of military discipline. Had these lads been walking homeward without rule, like a flock of sheep, the men would have got among them, carried away one or two, and the rest would have followed. But, drawn up in a line, they met the attack in a body, and thus it was repelled."

Six hundred and seventy youths are now enjoying the discipline and education of this interesting establishment. About one thousand have left the colony, having completed the period allotted to their training by the court. Of this number, it is said, ninety per cent. have turned out well,—a most remarkable result, considering the condition from which the inmates are taken, and the character they bring with them to the Colony.

---

#### KING'S COLLEGE.

NEW YORK being the key of the Western World, the landing-place of the nations, New Yorkers had so many of the duties of hospitality to perform that it was rather late before they erected the School-House. In this the Yankees got ahead of them,—a fact of history which they are careful not to have forgotten.

According to the records of Trinity Church, the earliest action in regard to this matter was taken in 1703, when the directors and wardens of the church were directed to wait upon Lord Cornbury, then Governor of the Province, to learn what part of the King's Farm had been intended for the college which he designed to have built. Yankee enterprise had not yet reached Manhattan, and things moved slow. At the end of half a century, the school numbered but ten students, who received instruction in the vestry-room of (old) Trinity. But the prospects were brightening. On the 31st of October, 1784, a royal charter was granted, which set forth, among other things, that divers sums of money had been raised by lottery and appropriated for the founding of a college; that the rector and inhabitants of the city of New York in communion with the Church of England, had set apart a parcel of ground,

on the west side of Broadway, and had declared themselves ready and desirous to convey the said land in fee for the use of a College, to be established upon the terms mentioned in their declaration—it therefore *ordained*, That the College should be known by the name of KING'S COLLEGE, and should be for the instruction and edification of youth in the learned languages and the liberal arts and sciences. Behold the beginning of the *Commencement*! The classics are now thoroughly established in the Paradise of the Great Manitou. Where formerly grave Manhattan chieftains held their *pow-wows*, mischievous young New Yorkers are scanning Greek hexameter.

Thus JOHN BULL had given the young Manhattanese permission to learn, as the Grandfather in *Les Miserables* gave Marius and Cossette "permission to love." He had provided them with what was, at that period, a very decent school-house. What more could the youngsters want? Tutors from the various colleges of the University of Oxford had been sent on for their instruction. Text-books, which the Greeks, Italians, Germans, and English had alternately thumbed and dog-eared, were sent to Manhattan, to be used—*up*. Surely, the students of old King's should evince their gratitude. Alas! they wanted one thing that they could not get, and that was permission to speak their minds.

And now we pause to call the roll of some of these early students and pre-Revolution graduates of King's College: Samuel Prevost, D. D., Bishop of the Prot. Episcopal Church in New York; Robert R. Livingston, the great Chancellor, Minister to France, and personal friend of Napoleon, as well as public-spirited citizen; Gouverneur Morris, the far-seeing statesman, accomplished diplomatist, and eloquent orator; Egbert Benson, jurist and sage; Richard Harrison; Bishop Moore, President of Columbia (formerly King's) College; the gallant soldiers, Van Cortlandt, Troupe, Ritzema, Van Schaaick, Dunscomb, and Willet (the leader of the New York Liberty Boys); John Jay, statesman, chief-justice, and diplomatist; and, pre-eminently, Alexander Hamilton, who left College without degree or diploma, leave or license, "to join the army."\*

All old colleges have their traditions. These are sacred. Victor Hugo would say that Young America should receive the following august legacy in an attitude of veneration. Tradition asserts that at the time that tried men's souls, the Genius of America, bearing the thirteen

---

\* Tradition tells us that Alexander Hamilton took out of College the "Leather-Caps," a company of students who wore caps of leather, on which was inscribed "Liberty or Death." Notwithstanding the rebellious conduct thus imputed to him, History accords to him the honor of saving from personal violence his unpopular master, the Tory President of the College, Miles Cooper, when he made his midnight escape from the exasperated Manhattanese.

stripes, but not so many stars as now, appeared in grand apotheosis, one twilight, to the students of King's College, and addressed them in the now classic Yankee Doodle rhythm :

GENIUS OF AMERICA (*solo*) :

Quit the Classics ! leave the Pen !  
And list the Trump of Glory ;  
For Students swell the ranks of men,  
That live in future story !

*Chorus. STUDENTS (marching rhythm) :*

To arms ! to arms ! rejoins the shout,  
We boys are men, and school is out !  
Our Country calls from vale to glen—  
Recruit the ranks of able men !  
So quit the Classics, leave the Pen,—  
For Alma Mater—Glory !  
King's Students swell the ranks of men  
That live in future story.\*

[*Going.*

*Grand Chorus :*

So every Student join the shout,  
"We boys are men, and school is out !"

[*Flourish of caps.*

And that's the way we "graduate,"  
And leave "the Classics" to their fate.

[*Exeunt.*

The spring of 1776 finds the college building converted, by order of the Committee of Safety, into a military hospital. The professors and students were consequently dislodged, and the library and philosophical apparatus were removed to the City Hall, whence very few of the books and a very small portion of the apparatus ever found their way back to College.

In 1784 all the seminaries of learning in the State were, by an act of the Legislature, subjected to a new corporation "by the name and stile

\* And yet *Headley* wrote, on the "Colleges of the Revolution," and published in the *Knickerbocker Magazine*, for April, 1861, a graphic narrative of the part taken by Harvard University, Yale College, and Nassau Hall, at Princeton—and never once mentioned the hero-students of old King's. This, to Manhattanese, was like making soup and leaving the bone out. How the "Old Knick," brought up at St. Nicholas's board with a Francis and a Verplanck, could for a moment have forgotten the honors of Columbia College, we cannot conceive. But retribution overtook the offender shortly afterward. The storied old *Knickerbocker* is now *non est*. Possibly it would have lived had the King's College students been suitably remembered !

of the Regents of the University of the State of New York ;" and the College (now under the august sway of Yankee Doodle) was re-christened, and thenceforth known as *Columbia College*. The College remained under the immediate supervision of the Board of Regents until April, 1787, when the original charter, with necessary alterations, was confirmed, and the College placed under the care of trustees. The first graduate under the "Regency," was De Witt Clinton. Among the first after the restoration of the charter, was the Rev. John M. Mason, D. D., well known as the energetic Provost of Columbia.

Dating from the original charter (October, 1754), the College has been in existence one hundred and thirteen years. From the time of the revision of the charter and the confirmation of the College as a republican institution, eighty years ago, a continuous tide of Columbian graduates have honored the land—many of them the sons, grandsons, and great-grandsons of the first graduates. To give a list of the distinguished men among them, divines, lawyers, authors, statesmen, and merchants, would be to recapitulate Great-grandfather Homer's Second Book of the *Iliad*, and call off the "catalogue of the ships:"—Manhattan has always been a great shipping-port, whence talent, like merchandise, has been shipped by the squadron.

---

GIVING JOY TO A CHILD.—Blessed be the hand that prepares a pleasure for a child, for there is no saying when and where it may again bloom forth. Does not almost everybody remember some kind-hearted man who showed him a kindness in the dulcet days of his childhood? The writer of this recollects himself as a barefooted lad, standing at the wooden fence of a poor little garden in his native village, while with longing eyes he gazed on the flowers which were blooming there quietly in the brightness of a Sunday morning. The possessor came forth from his little cottage; he was a wood-cutter by trade, and spent the whole week at work in the woods. He had come into the garden to gather flowers to place in his coat when he went to church. He saw the boy, and breaking off the most beautiful of his carnations—it was streaked with red and white—he gave it to him. Neither the giver nor the receiver spoke a word; and with bounding steps the boy ran home. And now, here, at a vast distance from that home, after so many events of so many years, the feeling of gratitude which agitated the breast of that boy, expresses itself on paper. The carnation has long since withered, but now it blooms afresh.—*Douglas Jerrold*.

## FEBRUARY, 1868.

---

### HOW TO CONDUCT A TEACHERS' INSTITUTE.

FOR the instruction of our readers in rural districts, who may desire to know how Teachers' Institutes are conducted in regions less remote from this great centre of moral and intellectual progress, we will recount a few of the more striking features of an Institute that lately came off almost within our city limits. We may be excused for suggesting that teachers and school-officers, unused to Metropolitan refinements, may derive great advantage, personal as well as professional, from a careful study of the elevated methods and practices of their civic brethren.

As is the general custom, great pains were taken in this instance to secure a large attendance. The Department at Albany was politely notified that no help from that source would be needed. The Commissioners were going to rely wholly upon "local talent." Flattering words were spoken, and flattering letters written to teachers, competent and incompetent, to induce them to come and "conduct exercises." All this, however, was merely complimentary; or, in common parlance, *a blind*. The real workers were to be the book-agents, who were specially invited to be on hand; and who, we may add, fairly swarmed at the Institute, each zealous to serve the Cause to the uttermost.

The Institute opened with a respectable attendance, though the more earnest friends of the meeting could not but regret the apathy which kept at home so many teachers, in other respects "progressive," and apparently imbued with proper professional pride. Some of the teachers who were present (evidently from retired districts) were so far behind the times that they actually expected the Institute to be conducted on the old-fashioned plan, with practical instructions in the art of teaching, and all that. But they soon discovered their mistake. The Commissioners were none of the old-fashioned sort. They were too smart for

that. They were promising young men, well versed in the *ins* and *outs* of parties, and admirably fitted to inspire the teachers with becoming reverence of the great work they were engaged in. They (there were three of them) took turns in presiding, a day at a time. One of them exerted himself handsomely, both while on and while off duty, attending faithfully to the—young ladies. The others were almost constantly in the balmiest state of "civilation," as Dr. Maginn used to express it. One made maudlin speeches the whole of one day. The other tried to be very upright, and met with commendable success, considering the difficulties of the case.

The Department, disregarding the advice of the Commissioners, sent a couple of ladies as instructors. At first they were ill received; but on learning that the Superintendent expected to follow them, the Commissioners suddenly became very respectful. The ladies were all entertained at one low rum-shop, and the Commissioners and gentlemen at another. One of the latter, the most intimate associate of the Commissioners, one day volunteered to read, and attempted to burlesque the instruction given by the ladies sent by the Department. Not only this, but the piece he read was of a character that would have disgraced a bar-room. This same gentleman and his associates were continually carping and criticising and endeavoring to annoy the instructors, and to render nugatory all their efforts—at least while they were present. Many of the gentlemen (thank Heaven, teachers are always gentlemen!) would answer to their names at roll-call, and then vanish to spend the day at the neighboring horse-race, or at the bar-room, or some other congenial place of resort, with the two Commissioners who chanced to be off duty.

The names of learned and able men had been announced as Lecturers; but none of them were there. "A mistake had occurred!" There were, however, three *Doctors* present—one a Doctor of Laws, who gave good advice; one a Doctor of Divinity, who delivered himself of a string of common-place on common-schools, and by skilful financiering, made the Commissioners pay not only his hotel bill and travelling expenses, but also eleven dollars for repairs to his wagon, which he broke turning a corner, in a vain-glorious attempt to exhibit the speed of his hired horse. The third, a Doctor of—Medicine, he styles himself—lectured twice: the first time in favor of his new book

on Physiology; the second, on the benefits of Life Insurance, and especially in the company of which he is the persistent agent.

As we said before, the book-agents swarmed. One good-natured old man, the agent for the books sold under his name (and, happily for him, containing evidences of learning much beyond his), was soon run off the track by the superior cunning of an astute agent of a rival series. The tactics of this last-mentioned agent are worthy of notice. By "kindly entreating" some of the prominent teachers he secured their favor, and as a matter of consequence the unofficial or rather semi-official endorsement of the Institute, which was manifested in various unpretending ways. For example, when the Critic reported on a certain evening the errors of pronunciation which he had observed during the day, he added the suggestion that all should avail themselves of the benefits of *Pickem and Watchem's* Readers, since in them the correct pronunciation of words was indicated, etc., etc., *ad nauseam*. Of course the agent of *Pickem and Watchem* was not present. And no one would suppose that he had anything to do with the matter. Or if any one were so foolish as to suppose such a thing, the conversation in the hotel parlor afterward would dissipate the illusion. Some wise young man informed the agent of the favor done him by the Critic; whereupon the agent was very anxious to learn the Critic's name, and to be introduced to him! As this was being done, some one of an inquiring disposition asked, "Why, Mr. C, don't you know Mr. A?" And Mr. C replied very politely, "I met Mr. A once in a crowd;" and, addressing Mr. A, he added, "I am very happy, Sir, to renew the acquaintance under such pleasant circumstances!"

There was another agent present—a lady in her manners—claiming to be the widow of a lamented teacher and author well known to the teaching world, and representing, as she said, an old and respectable publishing house. She was accompanied by a man of low, dissolute, and drunken habits, who was never absent from her side, playing the part of a devoted lover so obviously, as to excite the greatest commiseration for the sometime lady who had fallen into such associations. For the lover had a companion also—an ex-member of a troupe of minstrels, who, on the invitation of the Commissioners, sang songs before the Institute that made decent women hide their faces.

The exercises of the Institute closed with a ball, under the direction

of the Commissioners and the gentlemen we have described. As the local paper considerably remarks, "it was natural, after nearly two weeks of intellectual labor, that the teachers should desire a little superficial recreation, and to exchange the dust of the schools, as well as that of scholastic exercise, for the more varied and consequently less irritating dust of the ball-room." Some of the teachers were so foolish as to protest against this innocent innovation upon the usual customs of Teachers' Institutes; but their objections were not heeded. "The wishes of many of the ladies having been elicited on the subject,"—we quote again from the aforementioned local paper,—matters were soon arranged for the "soirée." "The lady teachers and their friends, to the number of perhaps fifty, were present, inclusive of the gentlemen, who, for some inexplicable reason, were rather in the minority." In spite of this untoward circumstance, however, "happiness was visible on every face," which, considering all things, is somewhat surprising. Mind, we do not object to teachers taking a "little superficial recreation." We merely note, as a matter for surprise, the fact that so many teachers in one locality are so happily constituted that they can enjoy the aforesaid recreation in a somewhat disreputable dance-house, and under the very eyes of their sober and scholarly superiors; for these same superiors, one of whom aspires to the highest educational office in the State, not only lent their gracious countenance to the proceedings, but unbent their dignity as actually to "seem" (the local editor is again our witness) "to participate in the happiness of those assembled."

What the bar-tender's receipts were that night we have not been able to learn; evidently they were not such as to cause him to regret seriously that his customers were not of the ordinary caste, but members of the Great Profession—benders of human twigs, practically illustrating how the trees incline.

Taken altogether, the Institute was a "success;" a matter of just pride to the profession, and well worthy of the consideration of all those who are interested in kindred associations.

---

IN consequence of unexpected delays in the verifying of certain important facts and dates, our article on "Eminent Educators who died in 1867" is not yet completed. We think we can safely announce its appearance in March.

## CIVILIZATION OR EXTERMINATION—WHICH?

ONE of the most momentous questions that ever thrilled the heart of a nation is now pending. Shall we murder a nation that seemingly stands in the way of our progress, or shall we civilize it?

It has been objected that the Indian is incapable of appreciating civilization. But History bids us have patience. Is the case of the Indian more hopeless than was that of the German when the Roman offered him the arts of civilization? Cæsar and Tacitus describe the ancestors of Goethe and Schiller, Kant, Klopstock, and Lessing, as wild savages of the Hercynian Forests—earth-worshippers, clad in the skins of the beasts they had slain, whose greatest skill consisted in the knowledge and application of certain medicinal herbs. The heroic deeds of their warriors were indeed couched in verse, and sung, upon solemn occasions, to the sound of various instruments; but the Romans have given a truly frightful description both of German music and German poetry!

And these were the ancestors of the present learned, musical, metaphysical Germans! We argue, therefore—hope for the Indian.

Now, to adapt civilization to the capacity of this Child of Nations.

There's no use sending on the priest and the schoolmaster until the Indian has begun to cultivate the soil. Possession implies home, and home is the stronghold of the virtues. Immense sums have been and are continually being expended upon the Indian. Some of these have been very injudicious expenditures: Witness the "umbrella, mosquito-net, paper-collar, and india-rubber overshoe" invoice. Yet there are some whole-souled Indian agents who are studying the good of their *protégés*, and certain tribes are well repaying the means and care expended upon them. *These* are gradually appreciating and adopting the blessings of civilization. They have broken the turf of ages with the plough of the pale-face, and eat of the corn their own hands have planted. They have mastered the first lesson of manual labor. The next step in the primary department of education is to the school-room. Shall we, by inhumanity and injustice, turn back, *exterminate* these tardy pupils—these children of nature, called latest to civilization—or shall we speed them on their way?

## CORRESPONDENCE.

### A REJOINDER.

[We take pleasure in doing substantial justice to an aggrieved author, by laying before our readers the following learned and courteous, and, we may add, effectual, reply to a review of his (Dr. Lambert's) "Primary Physiology," which appeared in our issue of last November. We sincerely hope that the Doctor's remarks will correct any false impression of his style of thinking and writing, that may have been conveyed by the reviewer. We would only add that, owing to the circumstances of the case, and the fact that the reply was prepared expressly for our pages, we are constrained to submit it just as it came to our hands,—not even taking the liberty to suppress an inadvertent criticism of what was taken from the Doctor's own book, or to correct his misquotation (unintentional, of course) of our critic's words.—*Ed.*]

**I**N the Monthly for November, under the head of current publications, there is to be found a pretended criticism of my last work on Physiology, mixed with a pasquinade upon me personally. Several educational friends insist that it should be noticed, and resented: otherwise I should have passed it, not that I am indifferent to ridicule, especially in such a public manner, I acknowledge to being sensitive, and that my feelings were hurt. But I thought that the animus was so evident and that I was so well known in the educational world, that the article would not injure me among my friends, and the gratification it would afford to those unfriendly to me would certainly do me no harm. But it was said, the Monthly has a very wide circulation, and among many who do not know Dr. Lambert, and who will be likely to be biased by such a lampoon. It was besides urged that it was my right and my duty to defend myself from such a gross attack; in behalf of others who might not be so well known and might therefore suffer great harm if such a wanton disregard of the decencies of respectable journalism is to be allowed to disgrace the pages of the Monthly.

Observe, I do not object to criticism, nor to the ridicule of ideas that are new: There are so many people who constantly live in the pluperfect tense—that any one who lives in the present, and much more if in the first or second future tense, must expect to have the ideas he presents laughed at. I have had too much experience to expect anything else. But I have also had the compensatory satisfaction of living to see those same people teach as excellent, what a few years previous they had sneered at. I have seen whole audiences, only a few years ago burst out laughing at the idea that washing the skin from head to foot, is essential to health; and shrink with horror from the idea that an open window in cold weather will enable a well clothed person to sleep warm. Yes within a year I have known an audience of so called educated people, most of whom could "talk Greek as readily as pigs can squeak" guffaw

most broadly at the idea that any kind of food could be selected with especial benefit to the brain; and then go right away and eat lobster salad and other indigestible food after ten o'clock at night. People seem to be especially prone to laugh at any new physiological ideas. But while I am willing that it should be so, and to battle against ridicule in the world I protest that the pages of the Monthly are not the place for the ridicule of anything, even of ideas. Much less are those pages the place for the introduction of personalities. Under the head of "current publications" it is no place to discuss Dr. Lambert. The grey hairs of nearly fifty winters plainly contradict the idea that he is a current publication.

Again sir, while I sustain your right and duty to have every book criticised thoroughly I also claim that it should be done fairly and by one who is competent—and with due regard to the feelings of the author, not to humble him too much. It is allowed that a man shall be beheaded by a skillful axeman and not hacked and haggled by a butcher's apprentice. If my book had been criticised by a good scholar, acquainted with the subject, and skilled in expression, though it had been scathed unsparingly, it would have been a pleasure to acknowledge a master and kiss his feet. But to be set upon by this whiffet who hopes he cannot be hit, because he has dodged under the fence of the Publisher's name is too bad. To own the truth I never was so much mortified, never so much chagrined as to perceive I had made such glaring blunders that they were detected by this Bohemian penny-a-liner. Notice the language of this pot which attempts to call the kettle black, "these citations might be extended to comprise a *good* part of the book" "the accuracy of a *good* part of the book is on a par with these extracts" &c "physiology learned *out of* the text books" &c "heat is *provided for*, by respiration *and the like*" It seems he does not know what *good* means, nor how to use any preposition respectably Bah! To set such a fellow to criticise my book or anybodies book is absurd I do not pretend to use the English Language with elegance; (my friends leniently chide me by saying I am too careless for one who knows better); nor do I wish to excuse the inaccuracies of my book (I will try to correct them in the next ed.) but when I make as many and as bad blunders as this fellow in the same space I will sell myself for paper rags. He averages more than one to a line except where he makes quotations from my book. Yet he has such an insufferable amount of egotism that he doubtless thinks his employers should pay him a "*good*" price for that exhibition of his ability in detraction.

But he is wanting not only in the scholarship essential to a critic, but he is also wanting in good manners, in every characteristic that constitutes a gentleman. Nothing is more beneath a gentleman than to attack a person who is known while the person who makes the attack is concealed. Of course the concealment in this case is not perfect: not only the ears, tail, and hoofs of the critic but the brand of his master can be plainly enough discerned by any one who can see through a mill stone.

Were he not wanting in all sense of propriety or refinement, he certainly would not have written such an article for the Monthly. He must have thought that he was writing for some 3d or 4th rate country affair and not for the columns of a respectable Educational Journal published in the metropolis of the western world.

Is it not strange that such a person should dream of being a critic Let him go to school by all means, or if he is a sophomore, out on a vacation, let him hurry back to college as soon as possible He will know more and feel less when he becomes a senior. (Particularly let him con the story about glass houses)

In regard to grammatical errors I acknowledge that the criticisms are in part just, however coarsely and in bad taste expressed

But all the rest that he finds fault with is worthy of praise.

The preface is placed where it is to save expense in the peculiar case—The treatment of the subject is out of the rut. The mode of treating it has been Americanized, as everything of European origin must be in order to adapt it to be entirely practical to the people of our country.

The mode of questioning was intended to make the study "nice and easy" to both scholars and teachers— The method is an invention and a good one ; such at least is the testimony of experience :

The argumentative, demonstrative, deductive or inferential style is especially adapted to please and instruct in the study of physiology, while it also very decidedly improves the mind of the scholar by accustoming it as in geometry to correct methods of thought

This critic would be very much benefited by studying the subject as set forth in this small book. Let him ask himself each of the "six or seven hundred questions that would if written out fill a similar volume" and learn the answers ; and when he reaches the last page, he will find that physiology rightly learned, tends to make persons humble not proud, regardless of the value of others, at least of their rights, not puffed up with vain conceit ; desirous of learning from the humblest sources, not self satisfied ; truth telling not falsifiers ;

He will also find that the synoptical Tables and the additions and subtractions he now sneers at will essentially aid him in understanding and remembering his lessons ; and he will also be thankful for any illustration, whether facetious or otherwise, that enables him readily to acquire correct ideas.

In fact he will find that long experience that has been attended with success in teaching any subject, is worthy of some confidence and that it has produced improvements in the presentation of physiology that render it far more attractive and practically useful than it has been

He will have his reasoning faculty raised to that "reach" that he will perceive that the illustration he has invented to show the author's bad style of logic is after all with a slight modification literally correct. His illustration is, "Man is an immortal being, therefore he has ten toes, and hence should keep his head cool and eat tripe." (I cannot see the use of the "he" This man criticises style!) Change the order, "*Man is an immortal being, hence should keep his head cool therefore he has ten toes and should eat tripe*" (when he can get it) That is a correct statement and by filling in the intermediate steps the correctness of the logic would be apparent. Let me say to the innominative critic that everything that exists in mans body and that everything he should do is owing to his being an immortal being, and that the chain of relation between Mans mind and its development and all parts of his body and of the entire world is perfect, is intimate, is important, and in fact should be the chief object of our studies. Boys should not play with edged tools ; they will either cut themselves or batter the tools,

(Allow me here to say that I did not say as I was reported last summer in the papers, that tripe was a kind of food that yielded a large supply of nutriment to the brain. I do not know about that; What I said, was that it was a very delicious article of diet and easily digested, therefore excellent when the system was exhausted; and that experience testified to its value in such a case. Try it.)

I have hopes therefore that even such extraordinary ignorance and arrogance combined, as is exhibited by the critic may be in part at least corrected by a course of physiological study even in this small book. if not it will only add one more proof of the correctness of the ancient remark about braying some kinds of folks in a mortar.

Yours.

T. S. LAMBERT.

---

#### THE CHARACTERISTIC AMERICAN BOOK.

PARIS, October 13, 1867.

THOSE of your readers who are endowed with a literary taste will learn with interest that American typography is well represented by another triumph of the Riverside Press in the shape of a superbly-bound copy of the last edition of Webster's Dictionary. I have never taken any part in the warfare which has so long raged between the great lexicographical W's, and care not a straw whether "traveller" is spelt with one *l* or two; but I cannot refrain, at the sight of a monument of the printer's skill so express and admirable, from offering my hearty, and, let me add, unsolicited commendation. I regard it, every time I enter our department, with a truly patriotic glow at the thought of its superiority to anything of that kind which the publishers or printers of England or France have produced. It is now considered, throughout the continent of Europe, not only the authority *par excellence* in English lexicography, but as the *characteristic American book*. It is better known and more widely circulated than any other. I have met with it at the Imperial Library in Paris, the Library of the British Museum, the Athenæum, and other London Clubs, and numerous other places. I have heard of it from Turkey, India, China, and even Japan. It is everywhere deservedly applauded for the elegance of its type, the distinctness of its impression, the beauty of the engravings, and the vast amount of information condensed within its covers. . . .

The *medal* which has been granted to Webster's Dictionary was richly merited, both through the value of the work itself and the patriotic energy of the Messrs. Merriams, of Springfield, who publish it, and who had the grace to look after the interests of our country at the Great Exhibition, when most other houses of this class thought it not worth their while so to do. It is another example of that liberal and far-sighted management, which, no less than the intrinsic worth of the Dictionary, has aided in securing its present widespread reputation. Whether this be the result of pride in the task they have thus taken upon themselves, philanthropic interest in a department which really concerns humanity at large, or considerations of business profit,—and it doubtless arises

from all of these combined—its publishers deserve well of their country, for they have done much to increase its celebrity, both at home and abroad. In the accuracy, taste, and good judgment of the Riverside Press they have found able coadjutors, and through the labors of both publishers and printers, Webster's Dictionary has attained to its present high position. It has already taken a prominent part in moulding the English language and aiding the advance of its evergrowing empire. As now appears, there is no limit to its progress, and the vigilant thrift and untiring industry of the Anglo-Saxon race will insure the spread of its speech wherever their sails brighten the sluggish waters of a foreign harbor. If the language of the Bible and of Shakspeare, of Burke and Macaulay, do not deteriorate in our mouths and in the utterance of those who deal with us, it will be largely owing to the onerous labors of the great Lexicographer, and the diligence of those who have so widely disseminated the evidence thereof.—A. [*Correspondent of the Boston Post.*]

---

#### EDUCATIONAL INTELLIGENCE.

UNITED STATES.—It is generally admitted that women are naturally better fitted than men for the delicate work of training the younger pupils in our schools. It is almost as generally admitted that they are, as a rule, quite as successful as men are with the older children. Nevertheless, there is a very general popular indisposition to pay them, as teachers, in just proportion to the amount and value of the work they do. This is strikingly manifested in the following statistics, which we condense from an interesting paper lately published in the *Tribune*. The averages of monthly wages no doubt exaggerate the relative difference between the pay of the two classes, since the men, for the most part, occupy what are considered the higher positions, and consequently receive the greater pay. Yet, making due allowance for that, the discrepancy between the wages of male and female teachers is much too great to be consistent with justice. According to the last census, there were in the United States 150,241 teachers, of whom 100,000 were women. In some of the States the proportion of women teachers is still greater. In Massachusetts there are six times as many female teachers as males. In Vermont the proportion is five to one, and in Iowa three to one. In the large cities the preponderance of female teachers is most marked. In Chicago there are 24 men to 241 women; in Cincinnati, 60 to 324; in Milwaukee, 14 to 70. St. Louis has 18 to 166, San Francisco 25 to 183. In the Eastern States the difference is increased: Boston has only 67 men to 565 women; Providence, 9 to 142; Brooklyn, 27 to 510; Philadelphia, 81 to 1,293; Baltimore, 42 to 335; and Washington, 4 to 56. Louisville has 29 male teachers to 103 women. In this city, in 1860, three-quarters of the public school-teachers were women. In 1866 there were only 178 males out of over 2,000 teachers, and the relative numbers have since remained about the

same. The cause of this remarkable disproportion is simply that teaching does not afford as good an opening for men as other occupations; and as people will always seek for the best attainable pay and employment, this field has almost been abandoned to women. It is true that the time required to fit a young man to become a teacher is short, and the lowest salary (\$1,000) is a little better than the average in other occupations; yet when it is considered that the beginner has nothing to look forward to but a prospective salary of \$2,500 or \$3,000, and even that only after years of labor, it is no wonder that few desire to adopt teaching, except as a temporary occupation. According to the State census of 1860, the average monthly wages of teachers, inclusive of board, in thirteen States of the Union, was \$30 for men and \$17 for women. In the six New England States alone, the proportion was \$32.46 for men, and \$16.33 for women; and the excess of the former was greatest in Massachusetts, being \$48.90 to \$19.02. The highest average pay given to women was in Rhode Island, being \$20.34 per month. In this city the salaries of public-school teachers at the same time ranged from \$250, the lowest salary for women, to \$1,500, the highest for men, per annum. The lowest salary of female teachers is now \$400, and the average is \$600, exclusive of principals and vice-principals, who get \$1,600 and \$1,100. The lowest salary of male teachers is \$1,000, the average being \$1,400. Male principals receive \$2,500 and \$3,000, according to attendance, and vice-principals, \$2,000. There are 49 male and 138 female principals in the city, those in boys' schools alone being men. The highest salary that any female teacher receives is \$2,000, which is paid to the principal of a school in St. Louis. There is a lady in San Francisco who receives \$1,800 for teaching modern languages; and one lady principal in this city receives \$1,700. But these are exceptional cases.

**GREAT BRITAIN.**—Notwithstanding the Abyssinian Expedition and the Fenian excitement, the educational question continues to be the chief, as it is the most important question before the people. Mr. Lowe's speech at Edinburgh, Mr. Bright's at Manchester, the discussions in Parliament and elsewhere, plainly show that a reform cannot long be delayed. A liberal, non-sectarian educational policy must be adopted, and that soon. The aristocracy naturally oppose every measure calculated to subvert their prerogatives: but the people are growing more and more in earnest; and their demand for free education must, in the end, prevail. It is surprising that the Lords can be so blind to what is inevitable as to commit themselves, as they did, in opposition to the principles expressed in the resolutions submitted to them by Earl Russell, December 2d, for they will have to accept them sooner or later, or be themselves overthrown. The resolutions were in substance as follows: That the education of the working-classes ought to be extended and improved; that every child has a moral right to the blessings of education, and it is the duty of the State to guard and maintain that right; that the diffusion of knowledge ought not to be hindered by religious differences, nor should the employment of the young in labor be allowed to deprive them of education; that Parliament and Government should aid in the education of the middle classes by providing for the better administration of charitable endowments; that the Universities of Oxford

and Cambridge may be made more useful to the nation by the removal of restrictions and the better distribution of their large revenues; and that the appointment of a Minister of Education, with a seat in the Cabinet, would be conducive to the public benefit. In the discussion called up by these resolutions, it was claimed that thirty per cent. of the population of England and Wales, as shown from the marriage-register, are unable to write their names; and that at least one million of English children are unprovided with any means of education. It was conceded by the Government that nearly eleven thousand parishes are excluded from the benefits of the existing educational system. And unless the system is radically changed, these neglected parishes, which most of all need State assistance, must go without schools, or depend upon private charity for them. The power of the Government is limited to the assistance of schools already established, and the consequence is that those who really need help receive none; while millions of money, granted for education, are lavished on schools which might very well do without such assistance.

FRANCE.—Two maps, lately published in Paris, are entitled "France that can read, and France that can write." In the latter the districts in which persons married in 1866 could not sign the register—in a proportion varying from thirty to seventy-five per cent.—are marked in black. Fifty-five departments are thus indicated, comprising all the south, centre, and west of France. The average of the illiterate married in 1866 is thirty-three per cent. The *Siccle*, which sums up these statistics, exclaims: "One-third of France unable either to read or write! Fifty-five departments out of eighty-nine in which the number of illiterate persons is from thirty to seventy-five per cent. Is it not a shame? And we talk of a new military organization! Let us rather busy ourselves with the instruction of this black phalanx of ignorance; let us devote to this national work a tithe of the millions we uselessly squander. Let us begin by beating Prussia on this ground. As regards primary instruction we are in the lowest rank of the European powers, and we imagine ourselves to be marching at the head of civilization!"

NORWAY has enjoyed a national system of public education since 1739, and the system underwent a complete revision in 1860. Its fundamental principles are, that every child must be taught; that the schools shall be free to all; and that the education provided must be plain and useful, and based on moral and religious training. The instruction embraces reading, writing, and arithmetic, selected portions of geography, natural history and general history, singing, and religion. Every child is obliged to attend a national school at least twelve full weeks a year from the time it is eight years old, unless it can be proved to be receiving proper education at home or elsewhere.

NEW ZEALAND.—New Zealand has resolved to found a university. Meetings have been held in Dunedin, the capital, and the legislature has been petitioned on the subject. In the mean time, as a temporary expedient, scholarships are to be founded, which will be open to all young men resident within the colony, and obtained by public competition, to enable the successful candidates to complete their education at one of the universities of the United Kingdom, or at any university of established reputation,—the selection to be made by the parents or guardians of the scholars.

## CURRENT PUBLICATIONS.

THE worst text-book of Geometry<sup>1</sup> we have ever seen is the one before us. It is so utterly bad in plan, treatment, scope, and design, that it would receive no notice from us, were it not for certain favorable notices it has had from quarters that render it capable of doing harm.

We expect usually to find in a text-book of this kind, at least accuracy of expression and something like logical reasoning. How far such expectations can be realized in Benson's Geometry, the samples afforded below will serve to show. The author proposes to correct present methods of teaching Geometry, and particularly to substitute for the "*reductio ad absurdum*" process the *direct method*. He administers a dignified rebuke to Euclid for his loose method of reasoning, and especially because so many generations of men have been misled by his "sophistical" method to believe that the ratio of the diameter to the circumference is  $1 : 3.14159$  etc.

The author informs us that though Archimedes discovered that the volumes of the cone, sphere, and cylinder of similar dimensions are in the proportion of 1, 2, and 3, it was reserved for Benson to add a fourth term to this sequence, by proving that the cone, sphere, cylinder, and cube of similar dimensions contain volumes in the proportions of 1, 2, 3, and 4.

It seems necessary, after this statement, to assure our readers that we are quite serious, and that we are criticising a real text-book, printed in this city, and adopted by authority for use in the public schools. But we hasten to lay before our readers some specimens from the book. The following definition first attracts notice: "Mathematics is that science which treats of those abstract quantities known as numbers, *symbols*, and magnitudes." So Mr. Benson confines Mathematics to the consideration of *abstract* quantities, of which symbols form a class. This is certainly new and original.

The fifth "definition" reads as follows: "Geometers define a point, position without magnitude; but to give a point position, would entitle it to the three dimensions of magnitude, whereas a point in Geometry expresses no dimension;" from which one would infer that the author discards the term entirely; but an examination of the book proves the contrary.

The nineteenth definition refers to measured or subtended angles in the circle, and ends thus: "Hence equal angles will be measured by equal arcs, and subtended by equal arcs; therefore equal arcs measure or subtend equal angles." By which it will be seen that it is a part of Mr. Benson's "*direct method*" to substitute statement for demonstration.

The first proposition of Book First is a problem requiring the construction of an isosceles triangle; and the corollary, by using the definition

(<sup>1</sup>) THE ELEMENTS OF EUCLID AND LEGENDRE, simplified and arranged to exclude from geometrical reasoning "The *Reductio ad Absurdum*," etc., etc. By LAWRENCE S. BENSON, author of "The Truth of the Bible Upheld," London, 1864; "Geometrical Disquisitions," London, 1864; "Scientific Disquisitions concerning the Circle and Ellipse;" 1862. Member of the New York Association for the Advancement of Science and Art; Hon. Mem. Phi Kappa Society, University of Georgia; Brothers' Society, Yale College; etc., etc., etc. [All rights reserved.] New York: Davies & Kent, for the Author.

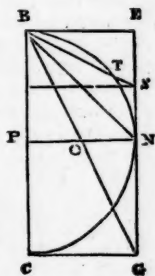
quoted above, concludes that in an isosceles triangle the angles opposite the equal sides are equal. After this, it is a matter for surprise that the well-known first proposition of Legendre should be found in this work, but we recognize it as the ninth of the First Book, though there is nothing in the plan of the author that requires its demonstration.

The objectionable features thus far referred to, it will be observed, are not in the author's conclusions, but in the method of deducing them. There are errors, however, of a graver character. To give specimens of all the bad features in one selection, we will lay before the reader the 2d corollary to the 17th proposition of Book Sixth. The proposition reads as follows: "*Every pyramid is one-third the prism of the same base and altitude, and every cone is one-third of the cylinder with the same base and altitude, or every pyramidal solid is one-third the solid of the same base and altitude.*"

After demonstrating this proposition, or the first portion of it (the last clause is, of course, not demonstrable), the author disposes in the first corollary of the relation between the cone, sphere, and cylinder, and then gives the following specimen of his own *direct* method:

"*Cor. 2.* If the parallelogram BEGC be revolved about the fixed axis BC, it will generate a cylinder (VI. def. 24); the semicircle BNC will generate a sphere (VI. def. 17); and the triangle BGC will generate a cone (VI. def. 21). The cone will be one-third the cylinder (VI. 17), and the sphere will be two-thirds the same cylinder (VI. 17, cor. 1). The triangle BOP having one-half altitude and one-half base of the triangle BGC, will generate a cone one-eighth of the cone generated by the triangle BGC (VI. 16, cor. 3); hence, one-twelfth of the cylinder generated by the square BENP; and the cone generated by the triangle BNP is one-half cone generated by the triangle BGC (VI. 16, cor. 1); hence, four times cone generated by the triangle BOP. And the hemisphere generated by the quadrant BNP is two-thirds cylinder generated by the square BENP (VI. 17, cor. 1), or eight times cone generated by the triangle BOP. Let the triangle BSN be described on BN, equal to the triangle BON (I. 23 and 15, cor. 4). Then the trapezium BSNP will generate a solid equivalent to the sum of a cylinder one-half cylinder generated by the square BENP, and a cone one-sixth of the same cylinder, or eight times the cone generated by the triangle BOP, making a solid equivalent to the hemisphere generated by the quadrant BNP on the same radius PN and same altitude BP. But the triangle BNP is common to both the trapezium BSNP and the quadrant BNP, and generates in each case the solid equivalent to four times cone generated by the triangle BOP; therefore the segment BN and the triangle BSN generate an equivalence of solid, or four times cone generated by the triangle BOP; consequently the segment BN and the triangle BSN are equivalent (I. ax. 1)."

We trust the reader will carefully consider this direct jump at the conclusion, because upon this "consequently" depends the author's fame as a discoverer, and moreover because it is entirely wrong. The segment and the triangle are *not* equivalent. The sections of equal solids of revolution are equivalent only when the centres of these sections de-



scribe equal paths. The consideration of this principle does not belong to Elementary Geometry, and is entirely beyond our author's grasp. The statement of the law involved in such cases is—*The volume of a body of revolution is equal to the product of the generating surface and the space described by its centre of gravity during the generation of the body.* (See Weisbach's "Mechanics," vol. i. p. 106.) It is known to students of Mechanics as one of Guldinus's properties. Now it follows from the above law, that when two equivalent solids of revolution are generated by surfaces whose centres describe unequal paths, the area or surface moving in the shorter path will be the larger in extent. The centre of the segment is manifestly nearer the axis than the centre of the triangle, and is consequently the larger area. The ratio of these areas is very nearly 8 : 7. We have not space for the remainder of this corollary; a single clause will be sufficient: "When a greater surface upon same radius generates a greater solid, and a less surface generates a less solid, equivalent surfaces must generate equivalent solids on the same radius; and, conversely, when we have equivalent solids generated upon the same radius, the generating surfaces are equivalent; therefore (I. ax. 1) the quadrant BNP is three-fourths of the square BENP, or the semicircle BNC is three-fourths of the parallelogram BEGC, or any circle is three-fourths of the circumscribing square, or THREE TIMES SQUARE OF RADIUS."

The author evidently believes that all equivalent areas formed within the parallelogram BEGC would generate equivalent solids if revolved about B, C. At any rate, we do not see how he can object to the following, after that corollary: The triangles BCG and BEG are equal, and must, when revolved about BC, generate an "*equivalence of solid.*" The triangle BCG generates a cone and BEG the remainder of the whole cylinder. Therefore the cone is one-half the cylinder. To be sure this is somewhat contradictory of the original proposition, but we offer it as a good sample of Mr. Benson's *direct method*. There are nearly seven pages of this proposition, with its corollaries and scholia. We have only space for scholium 1, which is suggestive. It reads as follows: "Therefore the second corollary gives the solution to the long-mooted and much-vexed question of the Quadrature of the Circle, showing that the perplexity of it arose from the *ungeometrical supposition* (V. 25, schol.) that 'the circle is a regular polygon of an infinite number of sides.' Hence it is evident that all conclusions derived from a fallacious supposition will give perplexity so long as the supposition is maintained, and must necessarily involve contradictions to the rigor of geometrical reasoning. And when demonstrations are conducted consistently with established definitions, axioms, and propositions, all conclusions derived from them are unimpeachable, and are valuable to a system of scientific truths."

We trust we have given enough to establish the truth of our statement at the beginning of this article, that the book is so utterly worthless as to be undeserving of notice in a public journal, if it had not already been recommended by professors of mathematics and some prominent journals, and its adoption in the public schools thereby secured. The careless kindheartedness which has wrought this result is abundantly rewarded by the conspicuous acknowledgments of the author in his book.

MOST of our popular treatises on Rhetoric limit the field of their inquiries mainly to one department of the art of composition; namely, that of writing or discoursing *effectively*. The treatise<sup>1</sup> before us, however, makes rhetoric embrace the whole subject of composition. "Rhetoric," says the author, "is the Art of Discourse,"—"the Art of constructing Discourse." The propriety of this extended application of the term might be questioned. "Speaking rhetorically," like "speaking grammatically," denotes a certain manner of speaking or discoursing. This implies that rhetoric, like grammar, properly treats, not of discourse as a whole, but of a certain department of the subject. Making use of the term, however, as the author does, he properly gives a very prominent place, indeed the chief place, to Invention. No treatise on composition can be considered as complete that ignores this vital point, the very point in regard to which learners most need instruction and guidance. As our author says, "It respects the soul and substance of discourse—the thought which is communicated." And we are pleased to see this part of the work so fully, so methodically, and so clearly treated. It abounds also in exercises, calling continually on the student for a practical application of the principles he has learned, and is thus calculated to lead him, step by step, to the comparatively easy acquisition of an art, the early attempts at which are generally so dry and unsatisfactory to both pupils and teachers.

The second division of the work is devoted to style. This is treated in an exceedingly systematic, able, and thorough manner. The work, as a whole, forms the most complete, and, at the same time, concise manual we have ever seen on the art of composition; for such in fact it is. It is not, however, an elementary work; nor does it profess to be. It is for learners, but for learners possessing some maturity of mind. It is adapted for use in colleges and academies; and for such institutions it would seem to be the text-book required, and better calculated to serve the end designed than any other corresponding treatise within our knowledge.

DR. TYNDALL's new work<sup>2</sup> is a publication of his course of Eight Lectures on "Sound," delivered before the Royal Institution. Like his lectures on "Heat," these are marked by a simplicity of style and an earnest eloquence, which render the subject interesting to all intelligent persons, whether they have or have not had a scientific training.

The first lecture relates chiefly to the nature of sound. In its opening sentences Dr. Tyndall takes a great stride toward accepting Dr. Carpenter's daring hypothesis, that the physical and the so-called vital forces are mutually correlative and convertible. He maintains that our sensations proceed from motion; that what the nerves convey to the brain is in all cases motion: but this is a motion, not of the whole, it is a vibration or tremor of the molecules or smallest particles of the nerve—a pulse or wave. Sound is produced by concussion and propagated by vibration. When a collodion balloon, containing a mixture of hydrogen and oxygen gases, is fired, the gases combine and generate a vast amount of heat; the air about the focus suddenly expands and forces the surrounding air

(<sup>1</sup>) THE ART OF DISCOURSE. By HENRY N. DAY. New York: C. Scribner & Co. Price \$1.50.

(<sup>2</sup>) SOUND—A Course of Eight Lectures, delivered at the Royal Institution. By JOHN TYNDALL, LL. D., F. R. S. New York: D. Appleton & Co. 12mo, pp. 335. \$2.50.

away; this motion is transmitted from one particle to another, and at length announces itself to the auditory nerve as sound. The intensity of sound depends upon the density of the medium in which it is generated; also upon the amount of matter set in motion: for the latter reason it varies inversely as the square of the distance. If confined so as to prevent lateral diffusion, little intensity is lost, even though the wave be conducted through a long distance. Biot carried on a conversation in low tones through an iron pipe 3,120 feet long. Sound may be reflected or refracted. Echoes are the result of reflection. Concave mirrors reflect the waves to a focus, as they do the waves of light and heat. In passing through a double convex lens of suitable material the waves are refracted. The rapidity with which sound moves depends upon the density and elasticity of the medium through which it travels, being retarded by increased density and accelerated by increased elasticity. It depends somewhat also upon molecular structure, the velocity being greater along the fibre of wood than along or across the rings.

The second lecture refers mainly to musical tones. Dr. Tyndall here gives the most minute description of the syren that we have ever read. His language is so graphic, that even without the aid of the excellent engraving, the reader could easily figure the instrument for himself. The investigation of the human voice and of the power of the ear is detailed. An explanation of artificial deafness is given, and excellent observations are made respecting the conduction of musical sounds through liquids and solids. Lecture third, on the vibrations of strings, is well worthy of careful examination. A thorough perusal of it by musical instructors would give them some theoretical knowledge which many of them lack, and would prevent them from committing the blunders so common in so-called scientific instruction. The fourth lecture, on the vibrations of rods, fixed and free, is beautifully illustrated by engravings, showing the results of investigations by Wheatstone, Chladin, Faraday, and Strehlike.

The sixth lecture is devoted to "Sounding Flames," a subject which has lately attracted much attention. In 1777 Dr. Higgins noted the tones of the hydrogen-flame surrounded by a tube. Chladin first investigated their nature, and showed that the tones were those of the surrounding tube. This conclusion was verified in 1818 by Faraday's experiments. In 1857 Count Schaffgotsch and Dr. Tyndall made extended observations confirmatory of those by the investigators just named. They discovered that when an ordinary gas-flame was surmounted by a short tube, a strong falsetto voice, pitched to the note of the tube, or its octave, caused the flame to quiver, and when the note of the tube was sufficiently high, the flame could be extinguished. A flame, burning silently in its tube, may be excited to singing when the voice is raised to the proper pitch. Under certain circumstances the singing will cease when the sound of the note is interrupted; under other circumstances the flame will only quiver, while again it will remain singing continuously. In 1858 Professor Léconte, while at a musical party, observed that soon after the music commenced, the naked flames of some fish-tail burners exhibited pulsations which were exactly synchronous with the audible beats. "A deaf man might have seen the harmony." The phenomenon did not take place until the discharge of gas was so regulated that the flame approximated to the condition of flaring. Experiment showed that the effects were not produced by jarring of the floor or walls, but that they

must have been owing to the direct influence of aerial sonorous pulses upon the burning jet. Dr. Tyndall gives some remarkable experiments upon sensitive flames, showing that they may be shortened, lengthened, and even changed in color by certain tones, and in some cases by intonation of certain vowels.

No other physicist so truly presents scientific matters as Dr. Tyndall does. Without degrading science, he proves that it requires no complex dialect to express its principles or explain its facts. His works are among the ablest contributions of our day to physics; yet they are so clear that the man unlearned in the schools can readily understand them. Though containing less of original research and travelling more in the beaten path than "*Heat as a Mode of Motion*," these lectures on Sound are not less valuable, for they bring forward many investigations little known and present facts already familiar in new and unexpected connections.

In preparing the original edition of his "*English Literature of the 19th Century*," Mr. Cleveland allowed his feelings as a philanthropist to overbalance his sense of duty as a critic, so that his selections were made, in many instances, not for their literary excellence, or because they best represented the style of the authors, but purely because the sentiment expressed was anti-slavery. As one of the leaders of public opinion in this direction, Mr. Cleveland has reason to be proud of the fearless expression of at that time unpopular opinion, which characterized the early editions of his books. How far his influence served to prepare the present generation for the work that has fallen to it to do, there is of course no means of estimating. It was certainly not insignificant. The twenty thousand copies of this work alone, scattered through the schools of the land, must have exerted no small influence upon the thousands of impressible minds subjected to their teachings. But this, however good and desirable in itself, was not the legitimate business of a text-book of literature. We are therefore pleased to see that, in bringing out the present revised and enlarged edition,\* Mr. Cleveland has "*felt at liberty*" to drop "*most of the protests against the barbaric past, to give the room thus gained to excerpts of a more strictly literary character*" (Pref., p. 5); thus adding materially to the literary value of his work. Thirty new authors have been laid under contribution, among whom are, Matthew Arnold, Charlotte Brontë, Robert Browning, Dickens, Thackeray, Hugh Miller, Shelley, Douglas Jerrold, and Ruskin. Supplementary lists of secondary authors have been appended to each decade, with short notices of their chief works,—in all three hundred and sixty-four authors, most of whom were not mentioned in the previous editions. A few of those who were represented by selections before, have now been transferred to the supplementary lists, to make room for the new authors we have mentioned. Several that are still represented might be served in the same manner, with advantage to the book, and their places filled with better selections from better writings. This, however, might possibly injure the popularity of the collection; for the best writers are seldom favorites with the multitude. Evidently Mr. Cleveland appreciated the popular demand when he gave as much space to Tupper as to Robert

(\* *ENGLISH LITERATURE OF THE 19TH CENTURY*. By CHARLES DEKTER CLEVELAND, LL.D. New York: J. W. Schermerhorn & Co.; Philadelphia: J. A. Bancroft & Co. 12mo, pp. 198. \$2.50.

Browning; more to Hood than to Tennyson; as much to Mrs. Barbauld as to Shelley; and to Anna Jameson as much as to Mrs. Browning.

As an editor, Mr. Cleveland is conscientious and faithful. His work is done carefully and well, and we have no doubt that the present volume will prove, as it well deserves to be, even more widely useful and acceptable than was the original work.

MR. SILBER, already favorably known by his "Progressive Greek Lessons," has prepared a brief Latin course\* for beginners, which contains an epitome of Latin Grammar, followed by reading exercises, notes, and references to standard Latin grammars, together with a vocabulary and exercises in Latin prose composition. So much is comprised in so little space, that at first the course appears superficial. It is not superficial, however, though somewhat too precise and detailed. It will be more useful for cramming purposes, previous to examinations, than as a book for beginners. The Reader resembles others of its kind, being based upon Jacobs'. The notes are good, formed after the excellent model set by Dr. Owen in his Greek Commentaries. They certainly approach the happy medium—few translations of passages, but many references to the Grammar. This course is a good one for the student, good to make him think. It is one of the best that we have seen for the use of those taking up the study at an advanced age.

SOME time ago a friend urged Mr. Boyd to annotate some of the older English Prose Classics for use in schools. Yielding to this suggestion, he has published Bacon's Essays,\* with critical and explanatory notes. The general plan of the work is excellent, but the execution is very defective. There is too much padding about it. Reviews of Bacon's Essays, by five authors, and critical estimates of his ability by six others, are prefixed. The student should have been permitted to form an estimate for himself. The notes themselves are voluminous, and in many cases of no value whatever. The greater number might have been omitted with profit, and had the book been half its size it would have been twice as useful. The volume seems to have been manufactured on the principle which obtains among druggists: unless the bulk is large and the price high, people will not take the medicine.

A *Correction*.—In the advertisement of the "Northern Monthly," in our December number, the price for three copies to one club was said to be \$7. It should have been \$7.50.

### BOOKS RECEIVED.

Messrs. Hurd & Houghton: ITALIAN JOURNEYS. By W. D. HOWELLS. \$2.00.—FOUR YEARS AMONG THE SPANISH AMERICANS. By F. HASSAUREK. \$2.00.  
Messrs. Harper & Bros.: THE HUGUENOTS. By SAMUEL SMILES.—THE HUGUENOT FAMILY. By SARAH TYTLER.—EVIDENCES OF CHRISTIANITY IN THE 19TH CENTURY. By ALBERT BARNES.  
MR. M. W. DODD: ON BOTH SIDES OF THE SEA. By the author of "The Chronicles of the Schöberg-Coita Family." \$1.75.—THE CLIFFORD HOUSEHOLD. By J. F. MOORE. \$1.35.—THE LITTLE FOX; OR, THE STORY OF MCCLINTOCK'S ARCTIC EXPEDITION. Written for the young. \$1.00. M

(\*) A LATIN READER. By WM. B. SILBER, A. M. New York: A. S. Barnes & Co. 12mo. pp. 225.

(\*) LORD BACON'S ESSAYS. By JAMES BOYD. New York: A. S. Barnes & Co.